Please replace the paragraph beginning at page 1, line 4, with the following rewritten paragraph:

B1

FIELD OF THE INVENTION

The present invention relates to a DNA microarray (DNA chip) which specifically reacts with a biochemical specimen and which is used for inspection equipment represented, for example, by a biochip to be used in order to obtain information on a structure of the specimen, especially in which several thousand to not less than ten thousand kinds of different types of DNA fragments are aligned and fixed at a high density as spots on a base plate such as a microscopic glass slide.

Please replace the paragraph beginning at page 1, line 15, with the following rewritten paragraph:

BACKGROUND OF THE INVENTION

The method of analyzing the genetic structure has been remarkably progressed in recent years. A large number of genetic structures represented by those of human genes have been clarified. The analysis of the genetic structure uses a DNA microarray (DNA chip) in which several thousand to not less than ten thousand kinds of different types of DNA fragments are aligned and fixed as spots on a base plate such as a microscopic glass slide.

Please replace the paragraph beginning at page 1, line 24, with the following rewritten paragraph:

In recent years, there is a demand for enhancing the reproducibility, the quantitative performance in the information obtained from the DNA microarray and obtaining much more information from the DNA microarray. The information

obtained from respective spots needs to be correct, uniform, and complex.

Please replace the paragraph beginning at page 2, line 17, with the following rewritten paragraph:

The conventional method of forming the spot is based on the supply (stamping) of the sample solution onto the base plate by using the pin. Therefore, the shape of the spot is diversified, for example, due to the shape of the forward end of the pin and/or the residue of the sample solution remaining at the forward end of the pin after the supply. As shown in FIG. 18, spots 200, each of which has many irregularities at the outer circumferential portion, are formed on a base plate 202.

Please replace the paragraph beginning at page 3, line 9, with the following rewritten paragraph:

The present invention has been made taking the foregoing problems into consideration, an object of which is to provide a DNA microarray which makes it possible to improve the inspection accuracy for genetic analyses and which makes it possible to increase the amount of information to be obtained.

Please replace the paragraph beginning at page 3, line 15, with the following rewritten paragraph:

Another object of the present invention is to provide a DNA microarray which makes it possible to achieve a high degree of concentration of spots and which makes it possible to perform detailed genetic analyses.

Please replace the paragraph beginning at page 4, line 7, with the following rewritten paragraph:

SUMMARY OF THE INVENTION

B4

The present invention lies in a biochip comprising a large number of spots based on capture solutions arranged on a base plate, obtained by supplying, onto the base plate, a plurality of types of the capture solutions each of which specifically reacts with a specimen and each of which is used to obtain information on a structure of the specimen; wherein a plurality of the spots, which have different spot sizes, are formed on the base plate.

Please replace the paragraph beginning at page 11, line 24, with the following rewritten paragraph:

B5

Especially, the amount of the capture per unit volume is preferably varied by discharging and supplying the capture solution a plurality of times to one spot on the base plate in accordance with the ink-jet system. That is, the capture solution is discharged and supplied a plurality of times in a divided manner without discharging and supplying a large amount of the capture solution at once. Further, the discharge interval is adjusted so that a previously formed spot is not widened in spot diameter due to superimposition of the capture solution subsequently discharged. Accordingly, the amount of the capture supplied to the spot can be increased or decreased without changing the size of the spot. Thus, it is possible to vary the capture density per unit area.

Please replace the paragraph beginning at page 14, line 11, with the following rewritten paragraph:

DETAILED DESCRIPTION OF THE DRAWINGS

B4 Embodiments of the DNA microarray according to the present invention will be explained below with reference to FIGS. 1 to 18.

Please replace the paragraph beginning at page 16, line 12, with the following rewritten paragraph:

The precipitated DNA fragments are rinsed with ethanol, followed by centrifugation. After that, the DNA fragments are dried to produce the DNA powder (purification step S12). A certain amount of x1 TE buffer is added to the obtained DNA powder, followed by being left to stand for several hours to completely dissolve the DNA powder (mixing step S13). Thus, the sample solution is prepared. The concentration of the sample solution at this stage is 0.1 to 10 μg/ml.

B7